

J. E. Rhoads and Sons, circa 1902
2100 West 11th Street
Wilmington
New Castle County
Delaware

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PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

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HISTORIC AMERICAN ENGINEERING RECORD

J. E. Rhoads and Sons

HAER DE-17

Location: 2100 West 11th Street in Wilmington,
Newcastle County, Delaware.
UTM: 18.451060.440540
Quad: Wilmington

Date of Construction: Firm organized 1702. Present struc-
tures erected in 1902.

Present Use: Manufacturing of leather, rubber,
plasticized nylon products.

Significance: In the late 19th century, Rhoads con-
centrated on the production of leather
belting--a product crucial to industry
in the era of power transmission via
line- and counter-shafts. Also
started in 1702 and still operating
in 1976, Rhoads was the oldest business
firm in the United States.

Historian: Christopher Derganc, August 1976.

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Introduction

Swedish settlers, in the early seventeenth century, were the first to tan leather in Delaware. By the late eighteenth century, tanning rivalled shipbuilding and flour milling as the state's principal industry. The beginning of the nineteenth century, however, brought bad times for Delaware tanners. Up to one-half were forced out of business by 1830. Around mid-century, prospects began to change, and over the next 20 years the leather industry grew to become the largest in that state. It was during this period that J. E. Rhoads and Sons, founded in 1702, moved their operations from Marple, Pennsylvania to Wilmington, Delaware. Rhoads soon established itself in the leather belting industry, and the firm continued in operation in 1976, making it the oldest business in the United States.

Business History of J. E. Rhoads and Sons [1]

In 1702 Joseph Rhoads established a tannery on his 100 acre farm in Marple Township, Pennsylvania. Rhoads, who probably learned tanning in his native England, typified the farmer-turned-tanner so prevalent in colonial America. [Photo DE-17-1] In 1732, Joseph died. His wife, Abigail, operated both the farm and tanyard until 1743 when their youngest son, James, came of age and received:

. . . a grant of land containing 65 acres, 52 perches (rods). . . with the buildings, including the tannery, improvements and all rights, privileges and appurtenances involved. . .

By 1774, Rhoads, the only tanner in Marple, had accumulated 192 acres of land, 6 horses, 9 cattle, and 1 servant--a rather prosperous homestead. In 1778 James died and left the farm and tanyard to his son, Joseph Rhoads II. During this early period the tanyard was probably of secondary importance and provided little income. Payments were usually received in hides and frequently produce, but rarely cash.

The 1780 Marple Township records list "Joseph Rhoads, tanner" with 150 acres of land, 3 horses and 3 cattle. Over the next decade, Rhoads added close to 400 acres and a scythe-stone quarry to his holdings. Joseph Rhoads II died in 1809 and left the farm, tanyard and quarry to 2 of his sons, George and Joseph III, who were to manage the business until the Civil War. The brothers farmed corn, potatoes, oats, wheat and hay in the summer, and tanned in the winter. Quarrying operations continued year round as weather permitted.

The tannery, before 1840, consisted of 16 handlers, 5 leaches and over 40 vats, most of which were underlaid by wooden pipes or "trunks." A horse-powered pump facilitated the flow of liquids between vats through these pipes. In 1830 an early, stone edge-runner bark mill was replaced by one "constructed of iron," quite

possibly of the coffee-grinder type. Again, horse power was utilized. A brook running through the property was diverted into a ditch to furnish the tanyard with water.

Black oak bark, "which formed a large part of the Delaware County bark," was obtained locally for \$6 a cord delivered. This type of bark possessed relatively small concentrations of tannin and

. . .gave a large amount of yellow extractive which penetrated the hide and caused much hard work in scouring in the currying shop, but made excellent shoe and harness leather. [2]

Hides were purchased on a percentage basis from toll-collectors on the Gray's Ferry and Market Street Bridges, over the Schuylkill River in Philadelphia. A 12-1/2¢ commission was paid for heavy hides while calf-skins commanded half that amount. Both the heavy "neats" leather for shoes and harnesses and lighter calf-skins tanned by Rhoads enjoyed:

. . .a high reputation in Philadelphia. . . .Their system however, made the leather light in weight and since leather was then sold by weight, it sold less profitably.

Rhoads employed a steady work force of 6 men, in addition to George and Joseph, at a time when the average tannery employed less than four workers. Referring to the tannery work force Jonathan E. Rhoads, Joseph's son, wrote in 1913:

In my earliest recollection previous to 1840 I can recall Richard Jacobs, George McLelven, Robert Wetherwill an apprentice as regularly employed in the tanyard and two colored men in the beam house. Also one currier, an expert hand. [3]

Additional help could be drawn from the farm and quarry as needed. The tannery was, by 1840, a money-making enterprise; yet output was still limited to about 25 hides per week.

In 1851 Jonathan Rhoads entered the business with his father and uncle; by 1858, he was a full partner. George died in 1859, and the firm was subsequently listed in Boyd's Business Directory as Joseph Rhoads and Son. Jonathan assumed full control upon his father's death in 1861. The outbreak of war in that year brought with it excellent business even though Rhoads, a Quaker, spurned the military market. Leather ". . .sold as fast as it could be turned out at high prices."

Output had increased to over 100 calfskins and about 25 heavy hides tanned weekly. The lighter skins were purchased from a "salter" in Wilmington. The salter was a merchant who bought skins from a butcher, preserved them with salt, and in turn, sold the

preserved skins to tanners. Downing and Price, a Wilmington tannery, supplied the heavy hides. Beginning in 1863, the tanned leather was sold through John S. Wood, a leather merchant in Philadelphia. This arrangement continued as long as Jonathan controlled the business.

The post-war recessionary period had a severe effect upon the tanning business in and around Marple. Local bark supplies were virtually exhausted and transportation costs over any considerable distance proved prohibitive. In 1867, Jonathan decided to move the tannery, by now the family's principal business (the scythe-stone quarry was depleted) to a new location. In August of that year, Phillip Garret, Rhoad's brother-in-law, wrote concerning a possible site:

I write to inform thee that the tanyard and business of Downing and Price at Wilmington are for sale and I thought thee might want to look into their availability for thy purposes, capacity of yard about 3,000 hides per year. My informant thought it a good business and that the firm had made a large amount of money at it.

Rhoads had dealt with Downing and Price for a number of years and apparently thought the venture worthwhile. With the aid of an \$11,000 loan from Garret and \$5,000 from the Wilmington Savings Fund Society, he purchased the tannery and moved his entire operation to Wilmington in 1868.

The new plant tanned principally the heavier sole and harness leather. Calf-skins, a major product at Marple, no longer constituted a sizeable portion of the business. Hides were purchased from the Wilmington Hide Association and bark from Johnson and Blackburn, barkmillers. Leather was sold primarily to industrial leather manufacturers such as H. S. McComb of Wilmington and Charles W. Arney of Philadelphia.

Industrial belting, which first appeared in the 1820s, was produced commercially in the 1850s and had become an established industry by the 1870s. Rhoads apparently saw potential in this field and in 1877 formed a partnership with Thomas McComb, the nephew of H. S. McComb (the first to manufacture leather belting in Delaware) to manufacture leather belting and shoe leather. The new firm of Rhoads and McComb was located at 4th and Orange Streets in Wilmington. Rhoads worked at both the leather manufactory and his tannery until 1881 when the latter was sold to H. A. DuPont for use by the Wilmington and Northern Railroad. Belting and other industrial leather constituted the major portion of production but,

The business, while probably adequate, was operated during a low period in national finance, and was not a great monetary success.

In 1887, Rhoads purchased McComb's share of the business and accepted his son, John, as partner. Eventually Rhoads' other sons, Joseph, George and William, entered the partnership, known as J. E. Rhoads and Sons. [4] The firm continued at the same location until 1889 when the factory was moved to 3rd and Orange Streets where improved machinery and electric power were installed. Leather was purchased from a number of local tanners including England and Bryan, Leas and McVitty, Massey and Janey, among others. Various new products were introduced at this time.

The firm. . . handled a great many miscellaneous products such as spray pumps, nozzles and a wide variety of rubber goods including rubber bands, gloves, rollers, wagon and car springs, tubing, force cups and malting. To a certain extent this. . . was experimental and not everything proved profitable. Rhoads soon worked into a rather exclusive, but side, handling of mill products, and then gradually concentrated on their own industrial leather goods.

A branch store was opened in Philadelphia in 1889. In 1897, the firm's headquarters were moved there, but the factory remained in Wilmington. Other branch stores were later opened in New York, Chicago, Cleveland and Atlanta, and a considerable foreign trade developed which was to last until World War I.

After 1890 Jonathan became less active in company affairs preferring to devote his time to "Quaker activities and the ministry." John soon "became the main strength of the firm and to a large extent it was his ability and leadership that established and advanced the company." Yet their Quaker heritage still dominated company policy as salesmen were not permitted to sell to:

. . . bottling works, tobacco, cigar, snuff, and cigarette manufacturers, brewers and distillers, and manufacturers or dealers in merchandise which is directly or indirectly used for war purposes.

While traveling in the early 1890s George Rhoads encountered an unusual leather being tanned by a German immigrant, William Aveyard of Doylestown, Pennsylvania. Aveyard's process, apparently unknown in this country, produced an extremely tough but flexible leather. George returned to Wilmington and began a series of small scale experiments designed to duplicate Aveyard's process.

The result of this experimentation was Tannate Round belting, which, while developed along the lines of Aveyard's process, was by no means identical.

Tannate Round proved far superior to oak-tanned belting. It was far more flexible, it pulled better and it didn't tear out at the hooks to the same extent as oak-tanned. The firm returned to commercial tanning in 1895 when Tannate Round was initially marketed. The rapid success of this new product caused Rhoads to expand its operations, and in 1898:

. . .extensive alterations calculated to increase the output were made. \$1,837.48 was spent at this time on the tannery. The tubs were lowered and altered; a boiler house and engine room were added; work was done on the roof. . .and general improvements were made.

In an effort to re-establish Rhoads in the tanning industry, the partners visited other tanneries, noting process details and their applicability to Tannate Round. The effort proved successful, for in 1900 the Franklin Institute, at its National Export Exposition, presented its highest award for quality and finish to Rhoads' belt.

In 1902 the factory was transferred to a new structure, designed and erected under George's supervision, at 2100 West 11th Street. [Photo DE-17-2 through 8] A rather complete research laboratory was included in the new building. Joseph's son, Edgar Rhoads, who had studied chemistry at the University of Pennsylvania, was placed in charge of this department.

. . .Edgar. . .started to work in the laboratory from the known requirements (of belting) to a belt that would fill them. This was one of the first, if not the first, systematic attempts in the industry to produce a really adequate leather for belting.

In 1906 Tannate Lace leather, similar to Tannate Round but of a lighter tannage, was introduced. It proved greatly superior to the rawhide previously used for belt lacing as it did not harden after exposure to moisture and was widely used for sport lacings and on several polar expeditions. Tannate Flat, a tannage that combined the most desirable qualities of oak and chrome tanning (with which Rhoads experimented briefly in the 1890s) was marketed in 1912. This belt provided a better combination of the following qualities than any other belt marketed at the time: ability to grip; freedom from stretch; strength; resistance to mineral oil, heat, acid fumes, and moisture; low internal friction (low static electric generation); and long service life.

In 1911 John Rhoads, who had guided the company for over 20 years, unexpectedly died. His death,

. . .was a severe blow to the firm; he more than any other, had been instrumental in the growth and expansion of J. E. Rhoads and Sons to a prosperous business. He was the senior partner in the fullest sense of the term and he carried a rather liberal share of the company responsibility.

George, who remained at the factory in Wilmington, became senior partner with William as financial manager in charge of the Philadelphia office. Jonathan E. Rhoads died in 1914, and the following year Edgar was admitted to the partnership. The years after 1910 were characterized by a shift in product emphasis, away from a large assortment of products manufactured by other firms. Concentration was on Rhoads' belting and accessories.

The War in Europe caused a major crisis for Rhoads and the leather industry in general. Foreign trade was eliminated and throughout the War

. . . prices of hides, and, inevitably of leather continued to rise as hides became harder to get. In June of 1919 prices were at their peak and the leather scarcity had become acute.

To reduce debts many companies were forced to liquidate stock at very low prices. Rhoads was bit hard, yet sales continued to rise until 1921. In that year, belt prices dropped from 52¢ per pound to only 10¢ per pound, causing a resultant drop in sales of over \$750,000. [5] But by 1922, the situation had stabilized and belt prices rose to almost 80¢ per pound.

The decade of the 1920s witnessed a great deal of developmental work at Rhoads resulting in several new products. In 1919, Gripotan, a double-ply combination of oak tanned leather and Tannate was introduced. Designed for the textile industry, Gripotan offered many benefits of Tannate at a lower price. In 1922 Power-Hold, a double-ply flat belting was marketed, also to serve the textile industry. By 1925, all Rhoads' belts were fastened with waterproof cement rather than with rivets. Two years later the firm perfected and endless, high-speed fabric belt known as Speedolite. In 1929 the company purchased, for 1,000,000 francs, a French process which yielded a very tough and flexible leather, marketed as Tannate Special.

The renewed prosperity was not long-lived however, as Rhoads soon faced another crisis:

During the '30s industrial leather firms faced not only the general depressed conditions of business, but also the change in manufacturing methods. The line-shafting that had typified factories for almost fifty years was being replaced by short-center and direct drives. It meant a substantial reduction in the belting market. It seems probable that Rhoads was better able to face this situation than most industrial leather manufacturers since they had experienced the changes that took place in their industry during the Industrial Revolution. [6]

The company embarked upon an extensive program designed to study and promote the development of short-center pivoted base drives. Leather

packings for hydraulic and pneumatic equipment were marketed as early as 1931. Various other uses for industrial leathers were developed and successfully promoted during these years.

William's two sons, Phillip G. Rhoads and Richard H. Rhoads were admitted to the partnership in 1935 and 1939, respectively. In 1940, Edgar's son, John B. Rhoads was also admitted. George died in 1937, and William in 1945.

During the early 1950s, the company developed a nylon-reinforced leather belting that is still very successful. In 1976, 85% of Rhoads' business involved rubber, plastic and nylon products; leather products constituted only 15%. Early in 1976, for the first time, daily company management passed to executives who are not Rhoads family members; Daniel C. Frysinger, chairman and Kenneth R. Bull, president. Both are veteran Rhoads employees and the managerial transition appears to have been smooth. Annual gross in the mid-1970s was about \$3,000,000, and the company employed 80 workers in its main plant and in four branch offices. [7]

Conclusion

The history of J. E. Rhoads and Sons is one of an amazing ability to adapt to changing market situations. The firm began as a small tannery in rural Delaware County, Pennsylvania at a time when the tanning industry was dominated by such firms. The centralization of the industry during the nineteenth century forced most of these small tanneries out of business. Indeed, the Rhoads tannery at Marple failed, but not the business. The entire operation was moved to larger quarters in the industrial city of Wilmington, Delaware. Industrial leather belting proved to be more lucrative than merely tanning; Rhoads became one of the leading producers of such belting in the United States. The introduction of short-center and direct drive cut substantially into the belting market, but Rhoads was able to diversify their product line sufficiently to remain a viable enterprise. In 1976 the company, while not large by present standards, still maintained a sizable production level.

This great adaptability enabled J. E. Rhoads and Sons to earn the title of "the oldest business in the United States."

NOTES

[1] The following, unless otherwise noted, is taken from Bettina Houston, A History of J. E. Rhoads and Sons, 1951. Unpublished ms in the J. E. Rhoads and Sons Collection, Eleutherian Mills-Hagley Library.

[2] Brief memorandum relating to the business of George and Joseph Rhoads of Marple, Pennsylvania, written from memory by Jonathan E. Rhoads, 24 September 1913.

[3] Ibid.

[4] A fifth son, Edward Rhoads, became a physician.

[5] William E. Rhoads' Record of Sales, in the J. E. Rhoads and Sons collection, Eleutherian Mills-Hagley Library.

[6] Philadelphia Magazine, February 1952, p. 28.

[7] "Running a Family Business for 274 Years," Nation's Business, July 1976, pp. 31-34.

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